

# FRAISES

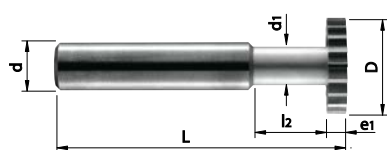
Fraises à T

T-Nutenfräser

T-slot cutter

Fresa a T

|                        |                                         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |  |        |        |         |
|------------------------|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--------|--------|---------|
| 2                      | 2                                       | 4                                                                                 | 1                                                                                 | 1                                                                                 | 2                                                                                 |  |  | G      | 224112 | 224112G |
| MD<br>HM/SC<br>MG KX10 | Fraises<br>Fräser<br>End mills<br>Frese |  |  |  |  |  |  | AlCrON |        |         |



**nouveau**

2 tailles  
denture droite  
Norme OPTI

| D  | $e_{1 \pm 0.01}$ | de stock ... | $d_1$ | $l_2$ | $d_{h7}$ | L  | Z  | Non revêtu    | Revêtu AlCrON  |
|----|------------------|--------------|-------|-------|----------|----|----|---------------|----------------|
| 4  | 0.3 - 1.5        | tous les 0.1 | 2     | 3     | 4        | 50 | 4  | 224112-04-... | 224112G-04-... |
| 6  | 0.3 - 1.5        | tous les 0.1 | 3     | 6     | 6        | 50 | 6  | 224112-06-... | 224112G-06-... |
| 6  | 2.0 - 3.0        | tous les 0.5 | 3     | 6     | 6        | 50 | 6  | 224112-06-... | 224112G-06-... |
| 8  | 0.3 - 1.5        | tous les 0.1 | 4     | 8     | 8        | 50 | 8  | 224112-08-... | 224112G-08-... |
| 8  | 2.0 - 3.0        | tous les 0.5 | 4     | 8     | 8        | 50 | 8  | 224112-08-... | 224112G-08-... |
| 10 | 0.5 - 1.5        | tous les 0.1 | 5     | 8     | 10       | 50 | 10 | 224112-10-... | 224112G-10-... |
| 10 | 2.0 - 4.0        | tous les 0.5 | 5     | 8     | 10       | 50 | 10 | 224112-10-... | 224112G-10-... |
| 16 | 0.5 - 2.5        | tous les 0.1 | 6.5   | 11    | 10       | 50 | 16 | 224112-16-... | 224112G-16-... |
| 16 | 3.0 - 5.0        | tous les 0.5 | 6.5   | 11    | 10       | 50 | 16 | 224112-16-... | 224112G-16-... |
| 20 | 1.0 - 2.5        | tous les 0.5 | 8     | 11    | 10       | 60 | 20 | 224112-20-... | 224112G-20-... |
| 20 | 3.0 - 5.0        | tous les 1   | 8     | 11    | 10       | 60 | 20 | 224112-20-... | 224112G-20-... |
| 25 | 1.0 - 2.5        | tous les 0.5 | 8     | 13    | 12       | 60 | 24 | 224112-25-... | 224112G-25-... |
| 25 | 3.0 - 5.0        | tous les 1   | 8     | 13    | 12       | 60 | 24 | 224112-25-... | 224112G-25-... |

Autres exécutions sur demande

# FRAISES

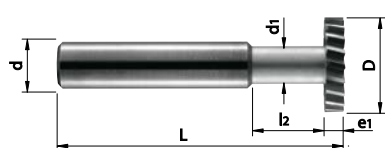
Fraises à T

T-Nutenfräser

T-slot cutter

Fresa a T

|                        |                                         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |  |        |        |         |
|------------------------|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--------|--------|---------|
| 2                      | 2                                       | 4                                                                                 | 1                                                                                 | 5                                                                                 | 2                                                                                 |  |  | G      | 224152 | 224152G |
| MD<br>HM/SC<br>MG KX10 | Fraises<br>Fräser<br>End mills<br>Frese |  |  |  |  |  |  | AlCrON |        |         |



OPTI  
cut

**nouveau**

2 tailles  
denture hélicoïdale  
Norme OPTI

| D  | $e_{1 \pm 0.01}$ | de stock... | $d_1$ | $l_2$ | $d_{h7}$ | L  | Z  | Non revêtu    | Revêtu AlCrON  |
|----|------------------|-------------|-------|-------|----------|----|----|---------------|----------------|
| 16 | 6 - 10           | tous les 1  | 6.5   | 11    | 10       | 50 | 16 | 224152-16-... | 224152G-16-... |
| 20 | 6 - 9            | tous les 1  | 8     | 11    | 10       | 60 | 20 | 224152-20-... | 224152G-20-... |
| 20 | 10 - 20          | tous les 2  | 8     | 8     | 10       | 60 | 20 | 224152-20-... | 224152G-20-... |
| 25 | 6 - 9            | tous les 1  | 8     | 13    | 12       | 60 | 24 | 224152-25-... | 224152G-25-... |
| 25 | 10 - 20          | tous les 2  | 8     | 10    | 12       | 60 | 24 | 224152-25-... | 224152G-25-... |
| 32 | 4 - 10           | tous les 2  | 16    | 13    | 12       | 60 | 32 | 224152-32-... | 224152G-32-... |
| 32 | 12 - 14          | tous les 2  | 16    | 10    | 12       | 60 | 32 | 224152-32-... | 224152G-32-... |
| 32 | 16 - 24          | tous les 2  | 16    | 5     | 12       | 60 | 32 | 224152-32-... | 224152G-32-... |

Autres exécutions sur demande

# FRAISES

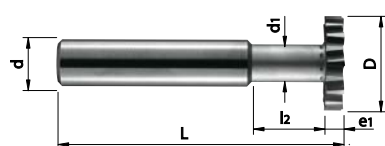
Fraises à T

T-Nutenfräser

T-slot cutter

Fresa a T

|                        |                                         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |  |        |        |         |
|------------------------|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--------|--------|---------|
| 2                      | 2                                       | 4                                                                                 | 1                                                                                 | 7                                                                                 | 3                                                                                 |  |  | G      | 224173 | 224173G |
| MD<br>HM/SC<br>MG KX10 | Fraises<br>Fräser<br>End mills<br>Frese |  |  |  |  |  |  | AlCrON |        |         |



OPTI  
cut

**nouveau**

3 tailles  
denture alternée  
Norme OPTI

| D  | $e_{1 \pm 0.01}$ | de stock...  | $d_1$ | $l_2$ | $d_{h7}$ | L  | Z  | Non revêtu    | Revêtu AlCrON  |
|----|------------------|--------------|-------|-------|----------|----|----|---------------|----------------|
| 6  | 0.5 - 2.5        | tous les 0.5 | 3     | 6     | 6        | 50 | 6  | 224173-06-... | 224173G-06-... |
| 8  | 0.5 - 2.5        | tous les 0.5 | 4     | 8     | 8        | 50 | 8  | 224173-08-... | 224173G-08-... |
| 8  | 3.0 - 4.0        | tous les 1   | 4     | 8     | 8        | 50 | 6  | 224173-08-... | 224173G-08-... |
| 10 | 0.5 - 2.5        | tous les 0.5 | 5     | 8     | 10       | 50 | 10 | 224173-10-... | 224173G-10-... |
| 10 | 3.0 - 4.0        | tous les 1   | 5     | 8     | 10       | 50 | 8  | 224173-10-... | 224173G-10-... |
| 16 | 1.0 - 2.5        | tous les 0.5 | 6.5   | 11    | 10       | 50 | 16 | 224173-16-... | 224173G-16-... |
| 16 | 3.0 - 6.0        | tous les 1   | 6.5   | 11    | 10       | 50 | 12 | 224173-16-... | 224173G-16-... |
| 20 | 1.0 - 2.5        | tous les 0.5 | 8     | 11    | 10       | 60 | 20 | 224173-20-... | 224173G-20-... |
| 20 | 3.0 - 6.0        | tous les 1   | 8     | 11    | 10       | 60 | 16 | 224173-20-... | 224173G-20-... |
| 25 | 1.0 - 2.5        | tous les 0.5 | 8     | 13    | 12       | 60 | 24 | 224173-25-... | 224173G-25-... |
| 25 | 3.0 - 6.0        | tous les 1   | 8     | 13    | 12       | 60 | 20 | 224173-25-... | 224173G-25-... |

Autres exécutions sur demande

# FRAISES

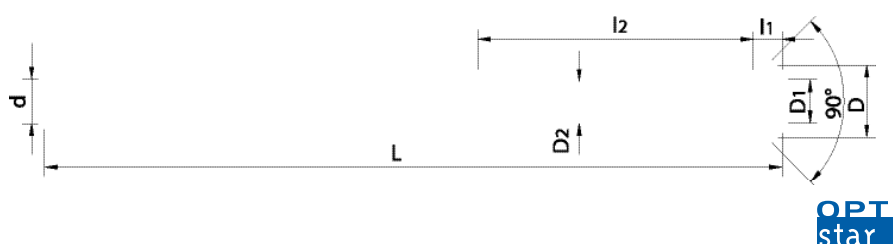
Fraises biconiques

Prismenfräser

Double angle cutters

Frese isocèle

|                        |                                         |                                                                                   |                                                                                   |                                                                                   |                                            |     |       |        |         |
|------------------------|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------|-----|-------|--------|---------|
| 2                      | 2                                       | 4                                                                                 | 4                                                                                 | 1                                                                                 | 1                                          |     | S     | 224411 | 224411S |
| MD<br>HM/SC<br>MG KX10 | Fraises<br>Fräser<br>End mills<br>Frese |  |  |  | $\lambda 0^\circ$<br>$\gamma \sim 8^\circ$ | 90° | AlTiN |        |         |



gamme élargie

Norme OPTI

| D    | $l_1$ | $D_2$ | $l_2$ | $d_{h6}$ | L   | Z | Non revêtu         | Revêtu AlTiN        |
|------|-------|-------|-------|----------|-----|---|--------------------|---------------------|
| 0.2  | 0.11  | 0.12  | 0.4   | 3        | 39  | 1 | 224411-090-00.2    | 224411S-090-00.2    |
| 0.25 | 0.13  | 0.15  | 0.5   | 3        | 39  | 1 | 224411-090-00.25   | 224411S-090-00.25   |
| 0.3  | 0.15  | 0.18  | 0.65  | 3        | 39  | 1 | 224411-090-00.3    | 224411S-090-00.3    |
| 0.4  | 0.19  | 0.24  | 0.8   | 3        | 39  | 1 | 224411-090-00.4    | 224411S-090-00.4    |
| 0.5  | 0.23  | 0.3   | 1.4   | 3        | 39  | 1 | 224411-090-00.5    | 224411S-090-00.5    |
| 0.6  | 0.27  | 0.36  | 1.7   | 3        | 39  | 3 | 224411-090-00.6    | 224411S-090-00.6    |
| 0.7  | 0.31  | 0.42  | 2     | 3        | 39  | 3 | 224411-090-00.7    | 224411S-090-00.7    |
| 0.8  | 0.35  | 0.48  | 2.5   | 3        | 39  | 3 | 224411-090-00.8    | 224411S-090-00.8    |
| 0.9  | 0.39  | 0.54  | 3     | 3        | 39  | 3 | 224411-090-00.9    | 224411S-090-00.9    |
| 1    | 0.43  | 0.6   | 5     | 3        | 39  | 3 | 224411-090-01.0-3  | 224411S-090-01.0-3  |
| 1.2  | 0.53  | 0.7   | 5     | 3        | 39  | 3 | 224411-090-01.2-3  | 224411S-090-01.2-3  |
| 1.5  | 0.63  | 0.9   | 6     | 3        | 39  | 3 | 224411-090-01.5-3  | 224411S-090-01.5-3  |
| 1.8  | 0.83  | 1     | 6     | 3        | 39  | 3 | 224411-090-01.8-3  | 224411S-090-01.8-3  |
| 2    | 0.83  | 1.2   | 8     | 3        | 39  | 3 | 224411-090-02.0-3  | 224411S-090-02.0-3  |
| 2.8  | 1.23  | 1.6   | 10    | 3        | 39  | 3 | 224411-090-02.8-3  | 224411S-090-02.8-3  |
| 3    | 1.33  | 1.7   | 10    | 3        | 39  | 3 | 224411-090-03.0-3  | 224411S-090-03.0-3  |
| 2.8* | 1.1   | 2.2   | 10    | 6        | 58  | 4 | 224411-090-02.8-6* | 224411S-090-02.8-6* |
| 3*   | 1.3   | 2.2   | 10    | 6        | 58  | 4 | 224411-090-03.0-6* | 224411S-090-03.0-6* |
| 3.8  | 1.6   | 2.9   | 12    | 6        | 58  | 4 | 224411-090-03.8    | 224411S-090-03.8    |
| 4    | 1.8   | 2.9   | 12    | 6        | 58  | 4 | 224411-090-04      | 224411S-090-04      |
| 4.8  | 2.1   | 3.4   | 15    | 6        | 58  | 4 | 224411-090-04.8    | 224411S-090-04.8    |
| 5    | 2.3   | 3.4   | 15    | 6        | 58  | 4 | 224411-090-05      | 224411S-090-05      |
| 5.8  | 2.7   | 3.8   | 18    | 6        | 58  | 4 | 224411-090-05.8    | 224411S-090-05.8    |
| 6    | 2.9   | 3.8   | 18    | 6        | 58  | 4 | 224411-090-06      | 224411S-090-06      |
| 7.8  | 2.8   | 4.9   | 34    | 6        | 100 | 4 | 224411-090-07.8    | 224411S-090-07.8    |
| 8    | 3.1   | 4.9   | 34    | 6        | 100 | 4 | 224411-090-08      | 224411S-090-08      |
| 9.8  | 3.8   | 5.9   | 34    | 6        | 100 | 4 | 224411-090-09.8    | 224411S-090-09.8    |
| 10   | 4.1   | 5.9   | 34    | 6        | 100 | 4 | 224411-090-10      | 224411S-090-10      |
| 11.8 | 5.8   | 5.9   | 34    | 6        | 100 | 4 | 224411-090-11.8    | 224411S-090-11.8    |
| 12   | 6.1   | 5.9   | 34    | 6        | 100 | 4 | 224411-090-12      | 224411S-090-12      |

\* Dimension livrable jusqu'à épuisement du stock

# TOURBILLONNEURS

**Tourbillonneurs**

Gewinderwirbler

Whirling tools

Utensili per rullare

2

2

4

8

1

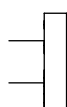
2

1

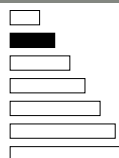
M

MD  
HM/SC  
MG KUF12

Fraises  
Fräser  
End mills  
Frese



Z1



PSNM

2248.121

2248.121M



**OPT**  
star

**nouveau**

Norme NIHS 06-02

| S   | Pas   | D <sub>1</sub> | D <sub>2</sub> | L <sub>1</sub> | d <sub>h5</sub> | L  | Z | D. de perçage |       | Non revêtu    | Revêtu PSNM    |
|-----|-------|----------------|----------------|----------------|-----------------|----|---|---------------|-------|---------------|----------------|
|     |       |                |                |                |                 |    |   | laiton        | acier |               |                |
| 0.3 | 0.08  | 0.21           | 0.13           | 0.7            | 3               | 39 | 1 | 0.23          | 0.24  | 2248.121-S0.3 | 2248.121M-S0.3 |
| 0.4 | 0.1   | 0.3            | 0.18           | 1              | 3               | 39 | 1 | 0.32          | 0.34  | 2248.121-S0.4 | 2248.121M-S0.4 |
| 0.5 | 0.125 | 0.38           | 0.22           | 1.25           | 3               | 39 | 1 | 0.4           | 0.42  | 2248.121-S0.5 | 2248.121M-S0.5 |
| 0.6 | 0.15  | 0.46           | 0.26           | 1.5            | 3               | 39 | 1 | 0.48          | 0.5   | 2248.121-S0.6 | 2248.121M-S0.6 |

# TOURBILLONNEURS

Tourbillonneurs

Gewinderwirbler

Whirling tools

Utensili per rullare

2

2

4

8

3

2

1

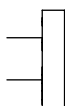
M

2248.321

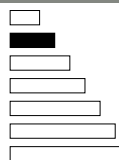
2248.321M

MD  
HM/SC  
MG KUF12

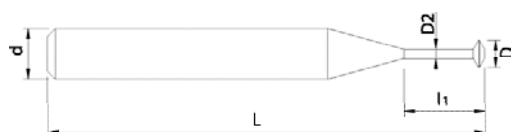
Fraises  
Fräser  
End mills  
Frese



Z3



PSNM



OPT  
star

**nouveau**

Norme NIHS 06-02

| S   | Pas   | D <sub>1</sub> | D <sub>2</sub> | L <sub>1</sub> | d <sub>h5</sub> | L  | Z | D. de perçage<br>laiton    acier |      | Non revêtu    | Revêtu PSNM    |
|-----|-------|----------------|----------------|----------------|-----------------|----|---|----------------------------------|------|---------------|----------------|
| 0.7 | 0.175 | 0.54           | 0.3            | 1.8            | 3               | 39 | 3 | 0.56                             | 0.58 | 2248.321-S0.7 | 2248.321M-S0.7 |
| 0.8 | 0.2   | 0.62           | 0.34           | 2              | 3               | 39 | 3 | 0.64                             | 0.66 | 2248.321-S0.8 | 2248.321M-S0.8 |
| 0.9 | 0.225 | 0.7            | 0.38           | 2.3            | 3               | 39 | 3 | 0.72                             | 0.74 | 2248.321-S0.9 | 2248.321M-S0.9 |
| 1   | 0.25  | 0.77           | 0.41           | 2.5            | 3               | 39 | 3 | 0.8                              | 0.82 | 2248.321-S1.0 | 2248.321M-S1.0 |
| 1.2 | 0.25  | 0.97           | 0.61           | 3.2            | 3               | 39 | 3 | 1                                | 1.02 | 2248.321-S1.2 | 2248.321M-S1.2 |
| 1.4 | 0.3   | 1.12           | 0.71           | 3.7            | 3               | 39 | 3 | 1.15                             | 1.17 | 2248.321-S1.4 | 2248.321M-S1.4 |
| M   |       |                |                |                |                 |    |   |                                  |      |               |                |
| 1.6 | 0.35  | 1.2            | 0.84           | 4              | 3               | 39 | 3 | 1.25                             | 1.3  | 2248.321-S1.6 | 2248.321M-S1.6 |
| 2   | 0.4   | 1.55           | 1.05           | 5.1            | 3               | 39 | 3 | 1.6                              | 1.65 | 2248.321-S2.0 | 2248.321M-S2.0 |

# TOURBILLONNEURS

**Tourbillonneurs**

Gewinderwirbler

Whirling tools

Utensili per rullare

2

2

4

8

3

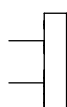
2

6

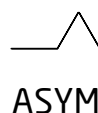
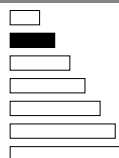
M

MD  
HM/SC  
MG KUF12

Fraises  
Fräser  
End mills  
Frese



Z3



ASYM

PSNM

2248.326

2248.326M



**OPT**  
star

**nouveau**

Profil ASYMETRIQUE

| S   | Pas   | D <sub>1</sub> | D <sub>2</sub> | L <sub>1</sub> | d <sub>h5</sub> | L  | Z | D. de perçage | Non revêtu    | Revêtu PSNM    |
|-----|-------|----------------|----------------|----------------|-----------------|----|---|---------------|---------------|----------------|
| 0.7 | 0.175 | 0.54           | 0.31           | 1.8            | 3               | 39 | 3 | 0.59          | 2248.326-S0.7 | 2248.326M-S0.7 |
| 0.8 | 0.2   | 0.62           | 0.37           | 2.3            | 3               | 39 | 3 | 0.68          | 2248.326-S0.8 | 2248.326M-S0.8 |
| 0.9 | 0.225 | 0.7            | 0.41           | 2.5            | 3               | 39 | 3 | 0.76          | 2248.326-S0.9 | 2248.326M-S0.9 |
| 1   | 0.25  | 0.77           | 0.44           | 2.8            | 3               | 39 | 3 | 0.84          | 2248.326-S1.0 | 2248.326M-S1.0 |
| 1.2 | 0.25  | 0.97           | 0.65           | 3.5            | 3               | 39 | 3 | 1.04          | 2248.326-S1.2 | 2248.326M-S1.2 |

# FRAISES scies

## Fraises Convexes

Konvexfräser

Convex cutter

Frese convesso

2

2

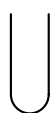
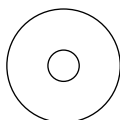
7

2

G

MD  
HM/SC  
MG KX10

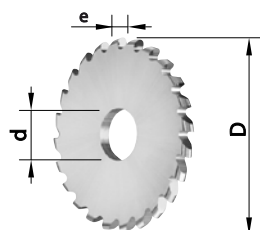
Fraises  
Fräser  
End mills  
Frese



AlCrON

2272

2272G



OPTI  
cut

**nouveau**

Norme OPTI

| D  | e   | R    | d <sub>H7</sub> | Z  | Non revêtu     | Revêtu AlCrON   |
|----|-----|------|-----------------|----|----------------|-----------------|
| 15 | 0.5 | 0.25 | 5               | 20 | 2272-015-R0.25 | 2272G-015-R0.25 |
|    | 0.6 | 0.3  | 5               | 20 | 2272-015-R0.3  | 2272G-015-R0.3  |
|    | 0.7 | 0.35 | 5               | 20 | 2272-015-R0.35 | 2272G-015-R0.35 |
|    | 0.8 | 0.4  | 5               | 20 | 2272-015-R0.4  | 2272G-015-R0.4  |
|    | 0.9 | 0.45 | 5               | 20 | 2272-015-R0.45 | 2272G-015-R0.45 |
|    | 1   | 0.5  | 5               | 20 | 2272-015-R0.5  | 2272G-015-R0.5  |
|    | 1.2 | 0.6  | 5               | 20 | 2272-015-R0.6  | 2272G-015-R0.6  |
|    | 1.5 | 0.75 | 5               | 20 | 2272-015-R0.75 | 2272G-015-R0.75 |
|    | 2   | 1    | 5               | 20 | 2272-015-R1    | 2272G-015-R1    |
| 20 | 0.5 | 0.25 | 5               | 20 | 2272-020-R0.25 | 2272G-020-R0.25 |
|    | 0.6 | 0.3  | 5               | 20 | 2272-020-R0.3  | 2272G-020-R0.3  |
|    | 0.7 | 0.35 | 5               | 20 | 2272-020-R0.35 | 2272G-020-R0.35 |
|    | 0.8 | 0.4  | 5               | 20 | 2272-020-R0.4  | 2272G-020-R0.4  |
|    | 0.9 | 0.45 | 5               | 20 | 2272-020-R0.45 | 2272G-020-R0.45 |
|    | 1   | 0.5  | 5               | 20 | 2272-020-R0.5  | 2272G-020-R0.5  |
|    | 1.2 | 0.6  | 5               | 20 | 2272-020-R0.6  | 2272G-020-R0.6  |
|    | 1.5 | 0.75 | 5               | 20 | 2272-020-R0.75 | 2272G-020-R0.75 |
|    | 2   | 1    | 5               | 20 | 2272-020-R1    | 2272G-020-R1    |
| 30 | 0.8 | 0.4  | 8               | 24 | 2272-030-R0.4  | 2272G-030-R0.4  |
|    | 0.9 | 0.45 | 8               | 24 | 2272-030-R0.45 | 2272G-030-R0.45 |
|    | 1   | 0.5  | 8               | 24 | 2272-030-R0.5  | 2272G-030-R0.5  |
|    | 1.2 | 0.6  | 8               | 24 | 2272-030-R0.6  | 2272G-030-R0.6  |
|    | 1.5 | 0.75 | 8               | 24 | 2272-030-R0.75 | 2272G-030-R0.75 |
|    | 1.6 | 0.8  | 8               | 24 | 2272-030-R0.8  | 2272G-030-R0.8  |
|    | 1.8 | 0.9  | 8               | 24 | 2272-030-R0.9  | 2272G-030-R0.9  |
|    | 2   | 1    | 8               | 24 | 2272-030-R1    | 2272G-030-R1    |
|    | 2.5 | 1.25 | 8               | 24 | 2272-030-R1.25 | 2272G-030-R1.25 |
|    | 3   | 1.5  | 8               | 24 | 2272-030-R1.5  | 2272G-030-R1.5  |

Autres exécutions sur demande

# FRAISES scies

Fraises Isocèles

Prismenfräser

Biconical cutter

Frese isocèle

2

2

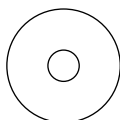
7

4

G

MD  
HM/SC  
MG KX10

Fraises  
Fräser  
End mills  
Frese

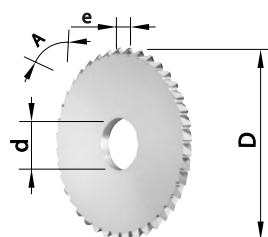


60°  
90°  
120°

AlCrON

2274

2274G



OPTI  
cut

**nouveau**

Denture fine

Norme OPTI

| Angle | D  | e   | d <sub>H7</sub> | Z  | Non revêtu       | Revêtu AlCrON     |
|-------|----|-----|-----------------|----|------------------|-------------------|
| 60°   | 15 | 1   | 5               | 30 | 2274-060-015-1   | 2274G-060-015-1   |
|       | 20 | 1   | 5               | 40 | 2274-060-020-1   | 2274G-060-020-1   |
|       | 30 | 1   | 8               | 40 | 2274-060-030-1   | 2274G-060-030-1   |
| 90°   | 30 | 1.5 | 8               | 40 | 2274-060-030-1.5 | 2274G-060-030-1.5 |
|       | 15 | 1   | 5               | 30 | 2274-090-015-1   | 2274G-090-015-1   |
|       | 15 | 1.5 | 5               | 30 | 2274-090-015-1.5 | 2274G-090-015-1.5 |
|       | 15 | 2   | 5               | 30 | 2274-090-015-2   | 2274G-090-015-2   |
|       | 20 | 1   | 5               | 40 | 2274-090-020-1   | 2274G-090-020-1   |
|       | 20 | 1.5 | 5               | 40 | 2274-090-020-1.5 | 2274G-090-020-1.5 |
|       | 20 | 2   | 5               | 40 | 2274-090-020-2   | 2274G-090-020-2   |
|       | 30 | 1   | 8               | 40 | 2274-090-030-1   | 2274G-090-030-1   |
|       | 30 | 1.5 | 8               | 40 | 2274-090-030-1.5 | 2274G-090-030-1.5 |
| 120°  | 30 | 2   | 8               | 40 | 2274-090-030-2   | 2274G-090-030-2   |
|       | 15 | 1   | 5               | 30 | 2274-120-015-1   | 2274G-120-015-1   |
|       | 15 | 1.5 | 5               | 30 | 2274-120-015-1.5 | 2274G-120-015-1.5 |
|       | 15 | 2   | 5               | 30 | 2274-120-015-2   | 2274G-120-015-2   |
|       | 20 | 1   | 5               | 40 | 2274-120-020-1   | 2274G-120-020-1   |
|       | 20 | 1.5 | 5               | 40 | 2274-120-020-1.5 | 2274G-120-020-1.5 |
|       | 20 | 2   | 5               | 40 | 2274-120-020-2   | 2274G-120-020-2   |
|       | 30 | 1   | 8               | 40 | 2274-120-030-1   | 2274G-120-030-1   |
|       | 30 | 1.5 | 8               | 40 | 2274-120-030-1.5 | 2274G-120-030-1.5 |
|       | 30 | 2   | 8               | 40 | 2274-120-030-2   | 2274G-120-030-2   |

Autres exécutions sur demande

# FRAISES

Fraises à fileter

Gewindefräser

Thread mills

Frese per filetare

2

2

0

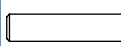
8

0/1

ISO  
60°

MD  
HM/SC  
MG KX10

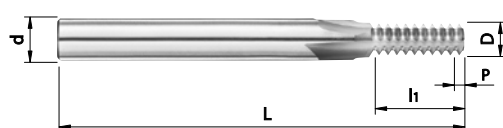
Fraises  
Fräser  
End mills  
Frese



M  
/  
MF

22080

22081



OPT  
cut

**nouveau**

FILETAGE INTERIEUR

Goujures droites

| M   | Pas  | D   | $l_1$ | $d_{h6}$ | L  | Z | Non revêtu       |
|-----|------|-----|-------|----------|----|---|------------------|
| 1.4 | 0.3  | 1   | 2.4   | 3        | 39 | 3 | 22080-03010N0.30 |
| 1.6 | 0.35 | 1   | 2.45  | 3        | 39 | 3 | 22080-03010N0.35 |
| 2   | 0.4  | 1.3 | 3.2   | 3        | 39 | 3 | 22080-03013N0.40 |
| 2.5 | 0.45 | 1.5 | 3.6   | 3        | 39 | 3 | 22080-03015N0.45 |
| 3   | 0.5  | 2.1 | 4.5   | 3        | 39 | 3 | 22080-03021N0.50 |
| 4   | 0.7  | 2.6 | 6.3   | 3        | 39 | 3 | 22080-03026N0.70 |
| 4.5 | 0.75 | 3   | 6.75  | 4        | 42 | 3 | 22080-04030N0.75 |
| 5   | 0.8  | 3.6 | 8     | 4        | 42 | 3 | 22080-04036N0.80 |
| 6   | 1    | 4   | 9     | 6        | 57 | 3 | 22080-06040N1.00 |
| 8   | 1.25 | 5   | 12.5  | 6        | 57 | 3 | 22080-06050N1.25 |
| 10  | 1.5  | 5.9 | 15    | 6        | 57 | 5 | 22080-06059N1.50 |
| 12  | 1.75 | 7.9 | 19.25 | 8        | 63 | 5 | 22080-08079N1.75 |
| 16  | 2    | 9.9 | 24    | 10       | 72 | 5 | 22080-10099N2.00 |
| MF  | 0.2  | 1   | 2.2   | 3        | 39 | 3 | 22081-03010N0.20 |
|     | 0.25 | 1   | 2.25  | 3        | 39 | 3 | 22081-03010N0.25 |
|     | 0.2  | 1.3 | 3.2   | 3        | 39 | 3 | 22081-03013N0.20 |
|     | 0.25 | 1.3 | 3.25  | 3        | 39 | 3 | 22081-03013N0.25 |
|     | 0.2  | 2.1 | 5     | 3        | 39 | 3 | 22081-03021N0.20 |
|     | 0.25 | 2.1 | 6     | 3        | 39 | 3 | 22081-03021N0.25 |
|     | 0.3  | 2.1 | 6     | 3        | 39 | 3 | 22081-03021N0.30 |
|     | 0.35 | 2.1 | 6.3   | 3        | 39 | 3 | 22081-03021N0.35 |

Autres exécutions sur demande

